

When on the point of becoming a pupa, the nervous lobes above the oesophagus are found to be considerably enlarged, and to have assumed more of the appearance of a cerebral mass ; while, at the same time, the nervous cords descending from them are shortened and thickened. The ganglia are brought nearer together, and their intervening cords lie between them in an irregular manner, the ganglia themselves being retained in their proper places in the segments by the nerves running transversely from them. The nerves of the antennæ are enlarged, and the optic nerves are become much thicker and shorter than before. There is a remarkable enlargement of the thoracic nerves, particularly of those sent to the wings ; and those belonging to the posterior pair of legs are curiously convoluted within the thorax, preparatory to their being uncoiled at the instant of the change being made to the pupa state.

These changes are followed minutely through several stages of development. The author expects to be able to lay before the Society, in a subsequent paper, the results of his investigation of the remaining stages, and to offer some observations upon the manner in which these changes are effected.

The Society then adjourned over Whitsun Week to the 21st of June.

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June 21, 1832.

HIS ROYAL HIGHNESS THE DUKE OF SUSSEX, K.G.  
President, in the Chair.

Papers were read, bearing the following titles :

1. "An Account of the magnetical Experiments made on the Western Coast of Africa in 1830 and 1831," by Commander Edward Belcher of H.M.S. Etna. Communicated by the Rev. George Fisher, M.A. F.R.S., through Captain Beaufort, R.N. F.R.S.

The object of the inquiry specified in this paper, and of which the results are given in a tabular form, was to determine the relative horizontal intensities of terrestrial magnetism on the different parts of the coast of Africa which the author has been lately employed in surveying. The experiments were made with four needles constructed by Dollond on the model of those of Professor Hansteen ; and the permanence of their magnetism during the voyage was verified by a comparison of trials made in England before and since the voyage. Errors arising from local causes of irregularity were guarded against by varying the places of observation at each station, and taking mean results.

2. "On the Use of a substance called the *False Tongue* in Foals," by Professor Sewell, of the Royal Veterinary College. Communicated by Sir Charles Bell, F.R.S.

The substance called the *false tongue*, which is thrown out from the mouth of the foal, either at the period of birth, or shortly before it, and to which various whimsical uses and virtues have been assigned, is conceived by the author to be requisite in this animal for the action of sucking, in consequence of its not respiring through